

UK Patent Application GB 2 354 065 A

(43) Date of A Publication 14.03.2001

(21) Application No 9921409.0

(22) Date of Filing 11.09.1999

(71) Applicant(s)

Jonathan Richard Swift
3 Leigh House, 13 Westby Road, BOURNEMOUTH,
BH5 1HA, United Kingdom

(72) Inventor(s)

Jonathan Richard Swift

(74) Agent and/or Address for Service

Jonathan Richard Swift
3 Leigh House, 13 Westby Road, BOURNEMOUTH,
BH5 1HA, United Kingdom

(51) INT CL⁷
B62J 6/00 3/00

(52) UK CL (Edition S)
F4R RFR R257 R384 R376

(56) Documents Cited

GB 2266418 A GB 2023321 A WO 93/15938 A
US 5138534 A
WPI abstract 1999-396254 & DE019842841A
WPI abstract 1998-522731 & DE029811709U
WPI abstract 1997-365213 & DE019652554A
WPI abstract 1997-345723 & JP090142350A
WPI abstract 1996-310570 & DE029600598U
WPI abstract 1996-216756 & JP080080883A
WPI abstract 1995-040846 & DE004420836A
WPI abstract 1993-168401 & DE004137323A
WPI abstract 1991-274579 & DE004006847A
ARGOS catalogue Autumn 1996 page 295

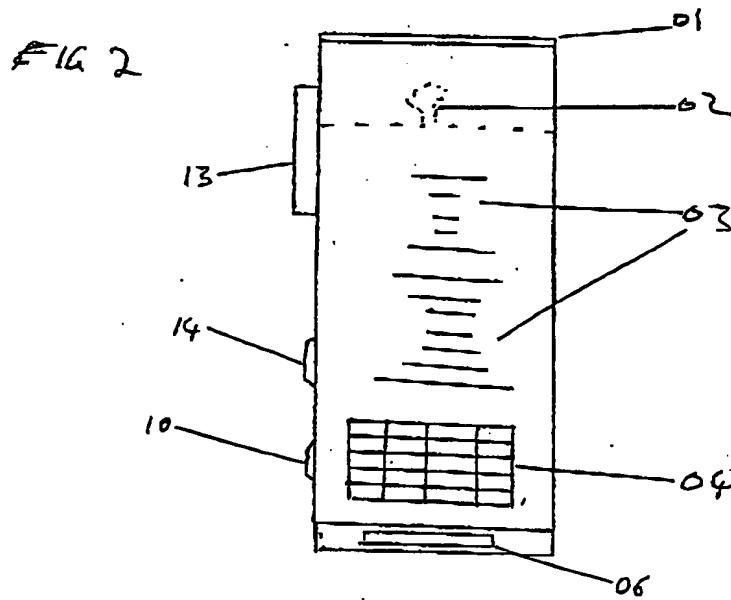
(58) Field of Search

UK CL (Edition Q) F4R RFR
INT CL⁶ B62J 3/00 6/00
ONLINE: WPI, EPODOC, JAPIO

(54) Abstract Title

Solar powered cycle lights

(57) Front and rear cycle lights are powered by batteries 3 (and 21, fig 3) rechargeable by solar cells 4 (and 18 fig 3) and have integral electronic hooters 14 (and 17, fig 3) operated by switches on the handlebars. A liquid crystal display giving the time, date, temperature, forward wind speed and battery condition may also be provided.



GB 2 354 065 A

BEST AVAILABLE COPY

1/2

FIG 1

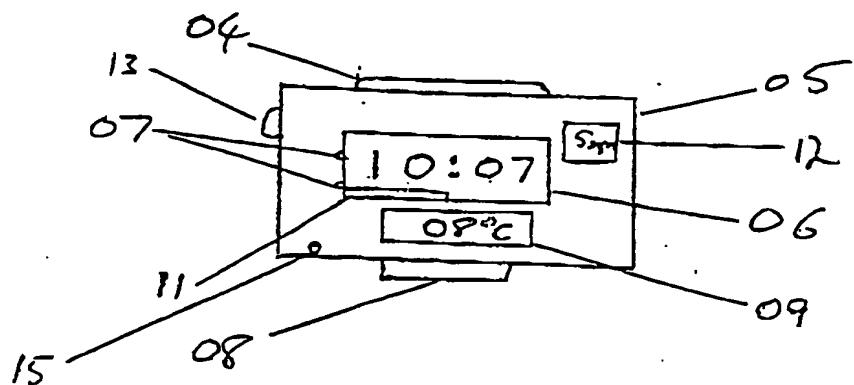
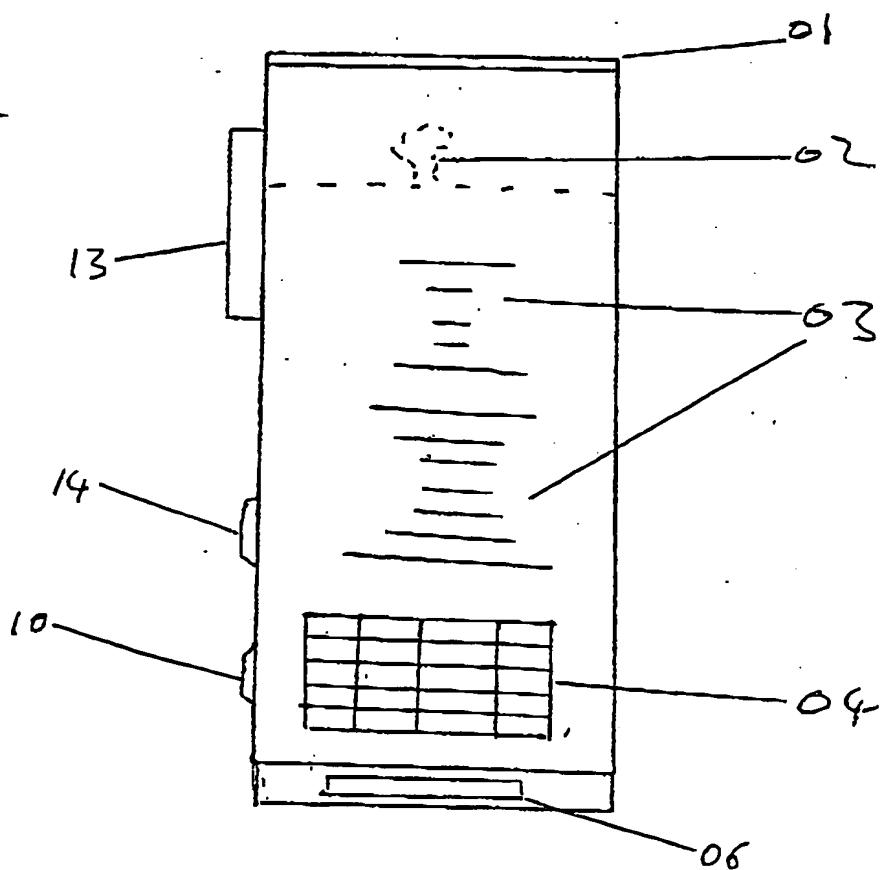


FIG 2



BEST AVAILABLE COPY

Claims

1. A front and rear cycle light set with solar rechargeable batteries (hardly ever requiring removal) including an electronic hooter audible for a distance of some 40 metres, a liquid crystal display indicating state of battery charge, time, date, temperature and forward air speed
2. A front and rear cycle light set as in claim 1 wherein both units are able to be mounted onto a cycle frame by the clips attached to the units
3. A front and rear cycle light set as set out in claim 1 and 2 wherein the units may be used as rechargers for rechargeable batteries which might then be used in other equipment
4. A front and rear cycle light set substantially as described herein with reference to figures 1 - 3 of the accompanying drawing



Application No: GB 9921409.0
Claims searched: 1-4

Examiner: Colin Clarke
Date of search: 1 December 1999

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.Q): F4R (RFR)

Int CI (Ed.6): B62J 3/00,6/00

Other: WPI, EPODOC, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage			Relevant to claims
Y	GB 2266418 A	SHIMANO	see claims 1-5	1-4
Y	GB 2023321 A	CAROLINA ENTERPRISES	see fig 1	1-4
Y	WO 93/15938 A	CYCLERT	see claims 1 & 3 and fig 1	1-4
Y	US 5138534	WU	see column 1 lines 7-27	1-4
Y	Derwent Abstract 1999-396254 & DE19842841A	GEILICH		1-4
Y	Derwent Abstract 1998-522731 & DE29811709U	HEINRICH		1-4
Y	Derwent Abstract 1997-365213 & DE19652554A	SALDANHA		1-4
Y	Derwent Abstract 1997-346723 & JP090142350A	HAYASAKA		1-4
Y	Derwent Abstract 1996-310570 & DE29600598U	TITZE		1-4
Y	Derwent Abstract 1996-216756 & JP080080883A	KUROSHIRI		1-4
Y	Derwent Abstract 1996-040846 & DE4420836A	ELLSAESER		1-4
Y	Derwent Abstract 1993-168401 & DE4137323A	LEHN		1-4
Y	Derwent Abstract 1991-274579 & DE4006847A	WILLEMS		1-4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.



The
Patent
Office



INVESTOR IN PEOPLE

Application No: GB 9921409.0
Claims searched: 1-4

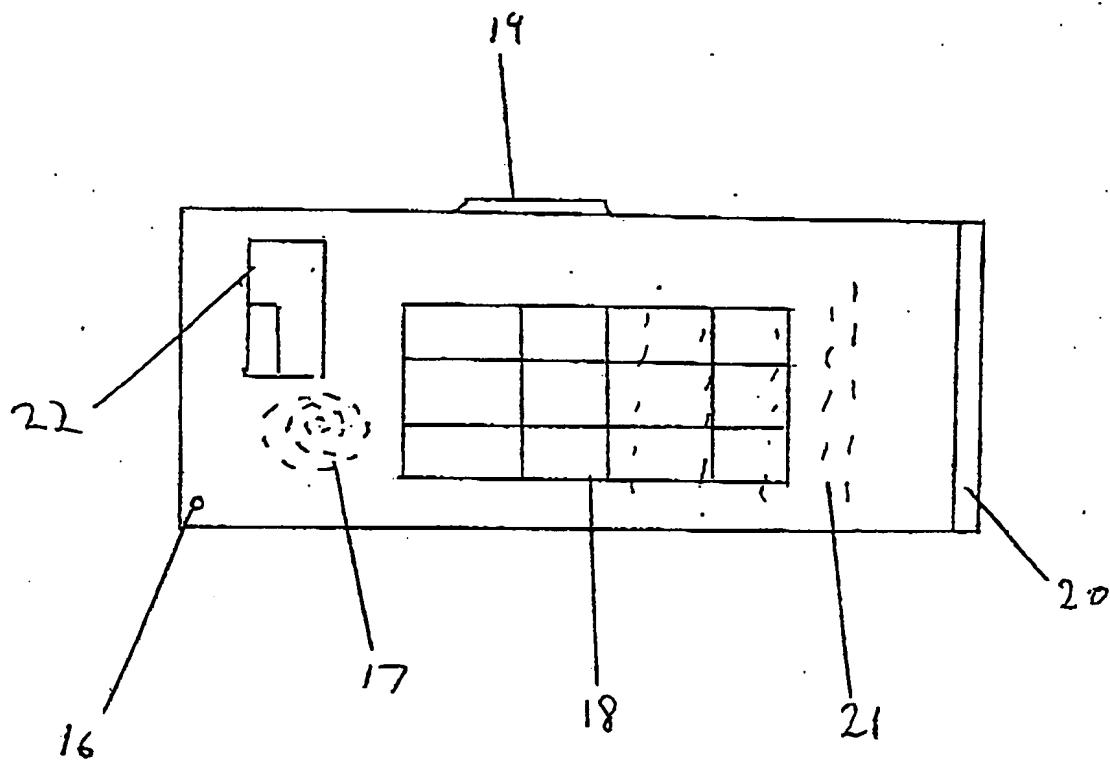
Examiner: Colin Clarke
Date of search: 1 December 1999

Category	Identity of document and relevant passage	Relevant to claims
Y	ARGOS catalogue Autumn 1996 page 295	1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

2/2

FIG 3



BEST AVAILABLE COPY

Front and rear solar recharge
cycle light set with hooters

This invention relates to a front and rear cycle light set with other features.

Existing cycle lights either use disposable batteries or rechargeable batteries which need to be removed from the lights and recharged in some other unit. These cycle lights will have special electronic circuits which will ensure that they are kept charged by using electrical energy gathered from the attached solar cells during daylight hours. In more northern latitudes provision may be made for attaching more solar cells to ensure that the charge is kept up. In addition both lights house electronic hooters activated by separate switches on the handle bars. The front light in particular contains many other features including a Liquid Crystal Display unit giving time or date and / or air temperature / and / or forward wind speed, together with a battery charge condition indicator (also a feature of the rear light)

Figure 1 Shows the rear of the front light with the instruments that it also houses

Figure 2 Shows the top of the light showing the batteries solar cells , wind speed detector and bulb

Figure 3 Shows the rear light unit , solar cells , battery condition indicator , hooter switch etc